The Builder.

No. CX.

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THE Metropolitan Buildings Act came into full operation on Wednesday, the 1st instant, and the new surveyors appointed under it came into authority. Their duties are not light,—there is much work before them; as, indeed, there is much increase of work for the district-surveyors appointed under the old Act,—and they must apply themselves vigorously to their task.

According to the new Act, buildings begun before the 1st instant, "and covered in and rendered fit for use within twelve months thereafter," are exempted from its provisions. A knowledge of this circumstance led to the commencement of a vast number of buildings in the new districts at the end of last year, for the most part in an insufficient and faulty manner. Immediately preceding the frost, and in some places during its continuance, the bricklayers were at work without taking even ordinary precautions to prevent injury to the work, such as using the lime quite fresh, clean Thames sand, good bricks perfectly dry; and covering up the walls at night, so as to allow the mortar to set as quickly as possible. The great demand having made bricks scarce, and consequently very dear, the merest rubbish has been used, and *mould*, in many places under our own eyes, has supplied the place of sand in the mortar. The consequence is, that much of the work done is not sound, and should be taken down; in fact, in several quarters it has not waited to be taken down, but has fallen of its own accord. Except in extreme cases, however, we apprehend the district-surveyors will not be able to interfere. Where danger is actually apparent, they may perhaps treat them as *ruinous buildings*, under the 40th section, and with the aid of the overseers and official referees, may cause them to be strengthened or demolished.

Schedule E. provides, relative to projected buildings, that "such projections must neither be built with, nor be added to, any building, or any face of an external wall thereof, so as to extend beyond the general line of the fronts of the houses." In some of the new districts, where the houses stand back from the road, and have front gardens, shops have been hastily executed on that space, to the destruction of regularity, the annoyance of the neighbourhood, and the manifest injury of the adjoining houses. In Brompton (part of Mr. Donaldson's district), a number of such erections have been made, in rows of what have been private houses. Whether or not the owners of adjoining buildings will be allowed to come forward in the same manner, the value of the houses as private residences being destroyed, will depend on the surveyor, as by the section already referred to, what is "the general line of the fronts of the houses" may be determined by him.

The question of drainage is one to which the attention of district surveyors is now first directed, and a very important one it is. Schedule H. provides that the drains from all buildings (hereafter built) shall be completed before the walls are ten feet high; and shall be taken into a common sewer, "if there be within 100 feet from any part of the building, or from the inclosure about the building, a common sewer into which it is *lawful and practicable to drain*."

Further on it provides, touching cesspools, that "if there be a common sewer within 50 feet from any front of or from the inclosure about any house or other building (hereafter built), then a cesspool must not be made for the reception of drainage from such house or other building, unless there be or shall be built a good and sufficient drain from such cesspool to such common sewer."

Insomuch, however, as the Commissioners of Sewers, who retain all their powers and authority, will not ordinarily allow drains to be taken into a sewer until it be brought up to the building about to be drained, this provision would seem to have the effect of compelling owners in many cases to build 50 feet of sewer:—a sewer being within that distance, they may not form cesspools.

Every main drain must be 9 inches in diameter inside; and must have a fall of at least half an inch to every 10 feet, and be arranged so that it shall be wholly covered over under the lowest floor, and independently thereof. It must likewise be made air-tight. In many new houses built "to sell," the pavement in the kitchen or passages forms the top of the drain: a most inefficient and improper mode of construction, which the foregoing provision will prevent for the future. All cesspools constructed under a building must be made air-tight. We need hardly say to our practical readers that in nine cases out of ten where the drains go into a sewer, it is much better to have no cesspool at all. With drains properly formed, sufficient water, and a good fall, cesspools are quite unnecessary, and should be avoided as a great nuisance.

Another important matter (so far as relates to public health) in which district surveyors are required to co-operate is, the prohibition of the use of buildings unfit for dwellings. No decided steps can be taken till the 1st of July, 1846; but overseers should already have reported to the official referees, the number and situation of dwellings in their respective parishes, wherein any underground room or cellar is occupied as a dwelling, in order that notice may be given to their owners and occupiers, of the provisions of the Act in this respect.

DECAY OF TIMBER—CAUSE AND CURE.

THE prevention of decay in the timber-work of buildings we may consider as being very much within our own power; for where due precautions are taken, in felling at the proper time, and thoroughly seasoning the wood itself, and in obviating the chances of harm which might accrue to it from contact with other materials, decay will rarely appear in any form. There are, no doubt, causes which induce decay, where the operation of those under the control of the architect or builder has been prevented: lofts are often filled with stores of a damp and musty nature; manufactures are carried on in which much water is used, much constantly spilt; very frequently, co-operating with this moisture in the work of destruction, is the heat of powerful stoves, which keep the air at a high temperature; painted and other floor-cloths are unsuspectingly and unsparingly spread and fastened down, intercepting the salutary action of the air, and retarding, if not totally preventing, such evaporation as may be wanted. But for such cases as some of these, extraordinary treatment is necessary, although much may be accomplished by mature preconsideration of the intended purpose of the building, and an anticipation of its liabilities.

Among the most active agents of decay in the timber of buildings may be instanced deficient drainage and imperfect ventilation. Where these exist, even perfect seasoning will not be sufficient to ensure durability. Where a radical reform is carried out in them, timber, even imperfectly seasoned, may better serve our purpose; for where damp is precluded, and thorough ventilation sustained, the seasoning must advance to perfection. It is in this conviction that we feel disposed to arraign the whole system of building, as it has been pursued in later times; and to hail with gratulation a change which, though little more than begun, will progress surely, and the further the more rapidly; till, with the "wisdom of our ancestors," in this particular, in vivid light before our eyes, enhanced by the superior state of science, a code of principles will be formed, infallible because founded on common sense. It will not long, we think, be cavilled with, that the existing (now passing) system of stuccoing, external and internal, however much talent, in many respects, it may display, is, in a great measure, contemptible and injudicious. Compoing induces bad bond; bad bond has given rise to bond timbers; these have been pent in by brick and plaster till they rotted away, and disunited the work they were meant to hold together. A niggardly anxiety to reduce the cost of carpentry, the most scientific and perhaps the most beautiful part of good building, has produced plaster ceilings, to the endangerment at once of the science itself, therefore of the stability of our walls, and of the durability of our floors, confining noxious and corrupting vapours. What can we more admire than the open timbering of an ingenious, skilfully-disposed roof, one worked with a view to its being left at all times visible? Which can we the more esteem, the palpable falsity of an ornamented plaster ceiling, that impends over our own heads and the brilliant scenes that shine around, or the more honest and safe, and equally ingeniously-elaborated timber soffit, not blandished over at fitful intervals with colour, but kept in healthy trim by good wholesome rubbing? But we must not diverge further from the straight line of our subject.

DAMP is a very active cause of decay: alternations of dryness and moisture are very destructive, such as is the case with the supports of a wooden bridge, or any other timbers in similar circumstances, weather-boarding, or fencing, exposed to the vicissitudes of the weather, for example. Timber placed in a situation which is constantly damp, is also liable to rapid decay—especially when exposed to atmospheric influence.

The object, then, is so to prepare the wood by some saturation or coating, as to render it impervious to the moisture which assails it: for this purpose several compositions are employed; but it must be remembered that while they are calculated to prevent decay in seasoned timber, unless the wood is thoroughly so, the application of any such covering will produce just the opposite effect to that which is intended—inclosing sap, and preventing evaporation, being known to afford infallible facilities to internal decay, besides which, however well the timber may be seasoned, and its sides defended against external influences, if due attention be not paid to the ends, whatever the position, all the care otherwise bestowed will be unavailing; the pores will admit the moisture, and decay will follow.

It is found that the wooden posts introduced to support the impending pon[illegible] mines, are rendered in a great degree imperishable by the constant and strong saline infusion which they imbibe; but notwithstanding this fact, it is obvious that timber seasoned by immersion in sea-water ought never to be employed for house-carpentry: for the impregnation which it has received will render it ever after most susceptible of damp, as indeed is any substance which contains salt; and while the particular timbers which had been so seasoned might contain within themselves principles exempting them from decay, they would most probably be the vehicle to bring destruction to the work around them: for the same reason the walls of buildings should not be built with mortar made with sea-water, or finished with plaster in which it is used.*

* If the mortar or parget with which a chimney-flue is to be plastered be mixed with salt, it will obviate any future temptation to contravene a very humane enactment—that which closed the particular channel for the pursuit of a trade, which seldom merited the especial investigation of the climbing-boy, for with every spell of damp weather, the salt will liquify and discourage the soot, a property which in one recorded instance remained unimpaired after thirty years' operation, but whether to the advantage or discomfort of those immediately interested does not appear.

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